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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,224

03/14/2006

Greg Harris

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EXAMINER

LAMB, BRENDA A

ART UNIT

PAPER NUMBER

1792

NOTIFICATION DATE

DELIVERY MODE

09/23/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@hahnlaw.com
akron-docket@hotmail.com

Office Action Summary	Application No.	Applicant(s)	
	10/532,224	HARRIS ET AL.	
	Examiner	Art Unit	
	Brenda A. Lamb	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 11, 12, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-12 and 18-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/1/2008 has been entered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7, 11-12 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ookouchi et al 5,571,327 in view of Long 4,609,577.

Long is applied for the reasons noted above. Long teaches the design of an apparatus which is comprised of a component made from a stainless steel containing

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an appreciable amount of nitrogen distributed substantially uniformly throughout its microstructure since it is known in casting the components of the metal in a molten state that the components are uniformly dispersed therein (see column 8 lines 26-31 and column 4 lines 33-41). Long teaches at column 8 lines 26-31 that his austenitic stainless steel may be cast to form the roller used in high temperatures environments. Long fails to teach his roller or component is used in a hot dip coating apparatus including a bath of molten coating alloy containing aluminium. However, Ookouchi et al teaches an apparatus and method of coating a steel strip manufacturing a sink roller for a hot dip coating process wherein the sink roller is constructed by casting using an austenitic stainless steel material. Therefore, it would have been obvious to modify the Ookouchi et al process for manufacturing a sink roller by casting using another known austenitic stainless steel material such as taught by Long for the taught advantage of his austenitic stainless steel material – increased service life in high temperature environments and especially in view of Ookouchi et al teaching at column 16 lines 48-52 that its material for use in a molten metal environment may be used in other high temperature environments. Thus claim 9 is obvious over the above cited references. With respect to claims 10-11, Ookouchi et al teaches a method of coating a metal strip in a bath of alloy containing aluminum using a sink roller which is cast from an austenitic stainless steel material. Ookouchi et al fails to teach casting the sink roller from an austenitic stainless steel material within the scope of claim. Therefore, it would have been obvious to modify the Ookouchi et al process and apparatus by substituting its sink roller cast from an austenitic stainless steel material with another sink roller cast

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having at least one layer from another known austenitic stainless steel material such as taught by Long for the taught advantage of his austenitic stainless steel material – increased service life in high temperature environments and especially in view of Ookouchi et al teaching at column 16 lines 48-52 that its material for use in a molten metal environment may be used in other high temperature environments. Thus claims 1-5, 11 and 18-19 are obvious over the above cited references. With respect to claims 6-7 and 12, Long fails to teach the stainless steel layer containing the nitrogen is disposed between the surface and a further layer. However, Long teaches at column 8 lines 26-31 that the core section of the roller is cast from the austenitic stainless steel material within the scope of the claim. Long teaches the layer over the core section is comprised of an austenitic stainless steel material within the scope of the claim. Long fails to teach the roller includes another layer having a surface in contact with the molten metal and further layer is formed from stainless steel. However, it would have been prima facie obvious to modify the Long roller by providing an additional layer of the recited stainless steel layer over the recited materials for the obvious advantage of increasing the wear resistance of the roller.

Claims 1, 3-4, 6-7 and 18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to the metes and bounds of term “appreciable” as set forth in claims 1, 3-4, 6-7 and 18 which is applied to define the level of nitrogen in the stainless steel alloy.

Applicant's arguments filed 10/29/07 have been fully considered but they are not persuasive.

Applicant's argument that the combination of Ookouchi et al and Long each fail to teach a component containing nitrogen having improved performance in the high temperature environment of molten 55% Al-Zn alloy at around 600 degrees C is found to be non-persuasive since it is not commensurate in scope with claim language with the claim language open with the term comprising to an coating alloy containing aluminum plus a metal that is not zinc such as copper and magnesium or it open to the bath containing a aluminum-zinc alloy but not a 55% Al-Zn alloy.

It is suggested that applicant amend the claims as follows to place the application in condition for allowance: at line 4 of claims 1 and 4 and at line 3 of claim 18 after "coating alloy containing" delete "aluminum" and insert -- 55% Al-Zn alloy --; at line 8 of claims 1 and 4 before "amount of nitrogen" and at lines 4-5 of claim 18 delete "an appreciable" and insert -- greater than 0.10 wt % --; at line 9 of claims 1 and 4 after "microstructure" insert -- to facilitate removal of buildup of inter-metallic materials from the surface --; at line 5 of claims 1 and 4 after "microstructure" insert -- to facilitate removal of buildup of inter-metallic materials from a surface of the component in contact with molten coating alloy --.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda A. Lamb whose telephone number is (571) 272-1231. The examiner can normally be reached on Monday-Tuesday and Thursday with alternate Wednesdays and Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton, can be reached on (571)272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brenda A Lamb
Examiner
Art Unit 1734

/Brenda A Lamb/

Primary Examiner, Art Unit 1792